

ZHIDELEV, M.A.; KALASHNIKOV, A.G.; GRACHEV, A.P., red.; ZHAMENSKIY,
A.A., red.; SHAPOSHNIKOVA, A.A., red.

[Mechanical engineering in school] Mashinovedenie v shkole.
Moskva, Izd-vo APN, 1961. 187 p. (MIRA 17:4)

ZNAMENSKIY, A. A.

Seed Industry

Mechanization of work on testing plots. Sel. i sem., 19, No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress
October 1952. UNCLASSIFIED.

PRONIN, Mikhail Yemel'yanovich, doktor sel'khoz. nauk; MINEYEV,
Vasiliy Grigor'yevich, kand. sel'khoz.nauk; ZNAMENSKIY,
Aleksy Alekseyevich, dots.; GRIGOROVICH, A.T., red.;
BERNGARDT, N.Ye., tekhn. red.

[Fertilizers in crop rotations] Udobrenia v propashnykh sevo-
oborotakh. Voronezh, Voronizhskoe knizhnoe izd-vo, 1962. 34 p.
(MIRA 15:6)

1. Voronezhskiy sel'skokhozyaystvennyy institut (for Znamenskiy).
(Fertilizers and manures) (Rotation of crops)

ERASIMSKIY, Sergey Petrovich; USHAKOV, N.M., redaktor; ZHACHENSKIY, A.A.,
redaktor; NGGERT, A.P., tekhnicheskij redaktor.

[Automation of industry] Avtomatizatsiya proizvodstva. Moskva,
Vses.uchebno-pedagog. izd-vo Trudreservizdat, 1956. 133 p.
(Automation) (MIRA 9:5)

KUZNETSOV, Mikhail Ivanovich; STRAKHOV, S.V., doktor tekhn.nauk, red.;
ZNAMENSKIY, A.A., red.; TOKER, A.M., tekhn. red.

[Fundamentals of electrical engineering] Osnovy elektrotekhniki.
8. izd., stereotipnoe. Pod red. S.V.Strakhova. Moskva, Prof-
tekhizdat, 1962. 559 p. (MIRA 16:2)
(Electric engineering)

KUSHCHENKO, Vasil'y Semenovich; ZNAMENSKIY, A.B., nauchnyy red.;
KLIORINA, T.A., red.; BRASOVA, N.V., tekhn.red.

[Collection of mathematical problems used in competitive
examinations and their solutions] Sbornik konkuranykh zadach
po matematike s resheniyami. Leningrad, Gos. nauchnoe izd-vo
sudestroit.promyshl., 1960, 371 p.
(Mathematics--Problems, exercises, etc.) (MIRA 13:10)

ZNAMENSKIY, A.B., kandidat tekhnicheskikh nauk.

Approximate investigation of the statical ship stability diagram.
Trudy VNITOSS 6 no.2:98-109 '55. (MLRA 10:5)
(Stability of ships)

ZNAMENSKIY, A.Ye.

Pulse signal transmission channel with frequency limitation of
the lower level. 'Elektrosvyaz' 19 no.6:70-71 Je '66.

(MIRA 18:6)

SHIMANSKIY, Yu.A., akademik; PERSHIN, V.I., redaktor; ENAMENSKIY, A.P.,
kandidat tekhnicheskikh nauk; redaktor; PETERSON, H.H., tekhnicheskii
redaktor

[Collection of articles on shipbuilding] Sbornik statei po sudostroeniiu. Pod obshchei red. V.I.Pershina. Leningrad, Gos. soiuзное izd-vo sudostroitel. promyshlennosti, 1954. 395 p. [Microfilm]
(Shipbuilding)
(MLRA 8:3)

BEZUK, V.M.; MOTILEV, Yu.L.; GROT, A.I.; ZNAMENSKIY, A.I.; IERUSALIMSKAYA,
M.F.; GERBUET-GYBOVICH, A.V., redaktor; KOVALICHINA, M.F., tekhnicheskiiy redaktor

[Building roads on saline soils and shifting sands] Stroitel'stvo
dorog na zasolennykh gruntakh i podvizhnykh peskakh. Moskva,
Avtotransizdat, 1953. 202 p.
(MLRA 7:8)

1. Moscow. Dorozhnyy nauchno-issledovatel'skiy institut.
(Road construction)

ZNAMENSKIY, A. I.

"In the Institute of Geology"
Izv. AN Turkm SSR, 1953, No 5, 97

The author reports on the laboratories and field investigations of the Institute of Geology, Academy of Sciences of the Turkmenian SSR, in the field of aerodynamics of wind-sand current in order to solve the problem of fighting against drifting sands. (RZhGeol, No 3, 1954)

SO: W-31187, 8 Mar 55

ZHAKHESKIY, A.I.

I.A.Volkov's article "Character of wind flow on the lee-side of
barkhans." Izv.Vses.geog.ob-va 89 no.3:259-261 My-Je '57.
(MIRA 10:11)
(Sand dunes) (Volkov, I.A.)

ZNAMENSKIY, A. I.

Cand. Geograph. Sci

Dissertation: "Wind Erosion and the Relief of Sand Deserts."

15 April 49

Inst of Geography, Acad Sci USSR

SO Vecheryaya Mosk'va
Sum 71

PLUNGYAN, Tat'yana Markovna; ZNAMENSKIY, A.K., retsenzent; GABOVA,
D.M., red.

[Conveyorization of operations in knit goods manufacture]
Konveierizatsiia protsessov v trikotazhnom proizvodstve.
Moskva, Legkaia industriia, 1964. 140 p. (MIRA 17:9)

ZNAMENSKIY, A. V.

A. V. Znamenskiy, "Development of a System of Control Measures against Pests and Diseases of Grain Crops," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1935 Goda, 1936, pp. 91-97. 432.92 1541

SO: Sira Si 90-53, 15 Dec 1953

ZNAMENSKIY, A. V.

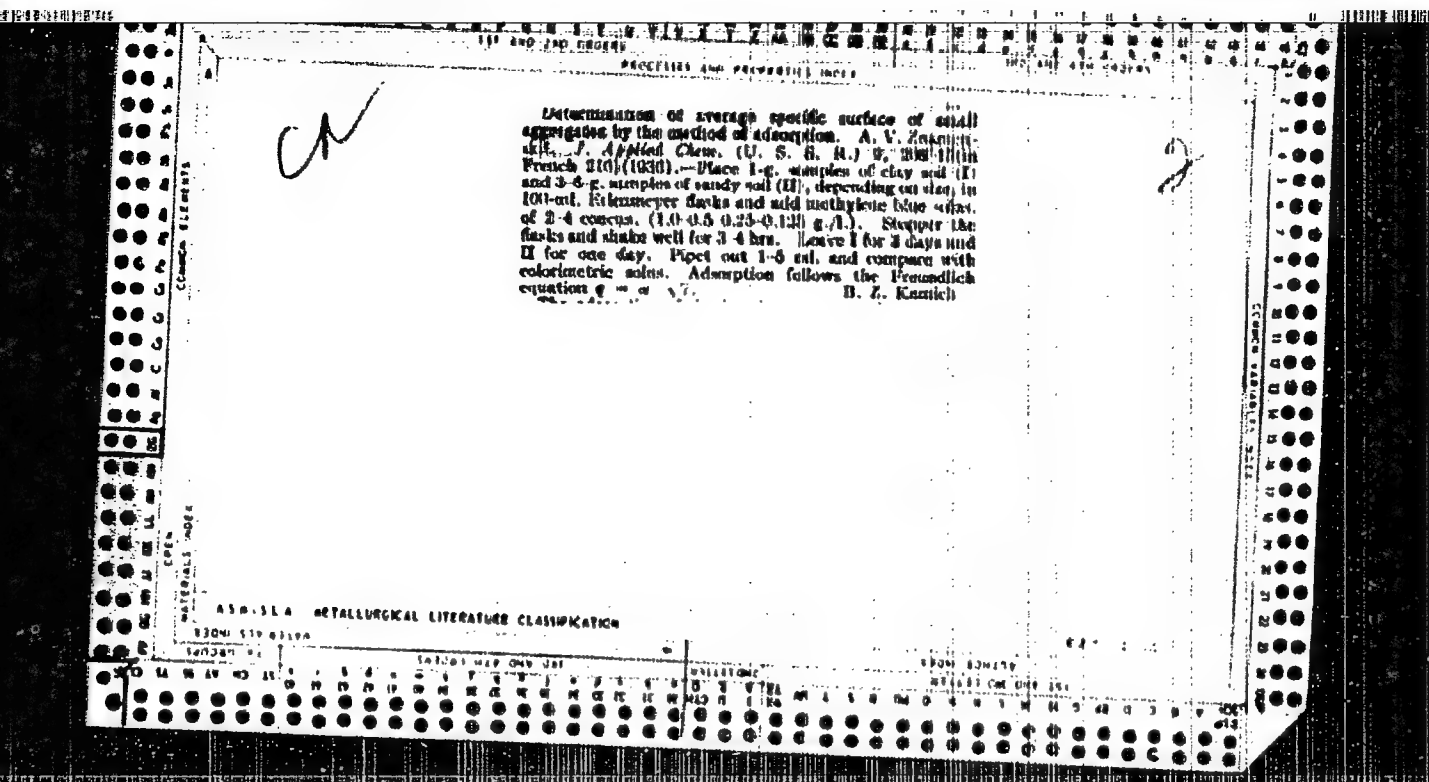
Znamenskiy, A. V. "Plan of Work of the All Union Institute of Plant Protection in 1933-1937," Sbornik Vsesoiuznogo Instituta Zashchity Rastenii, no. 2, 1932 pp. 6-11. 464.9 L542

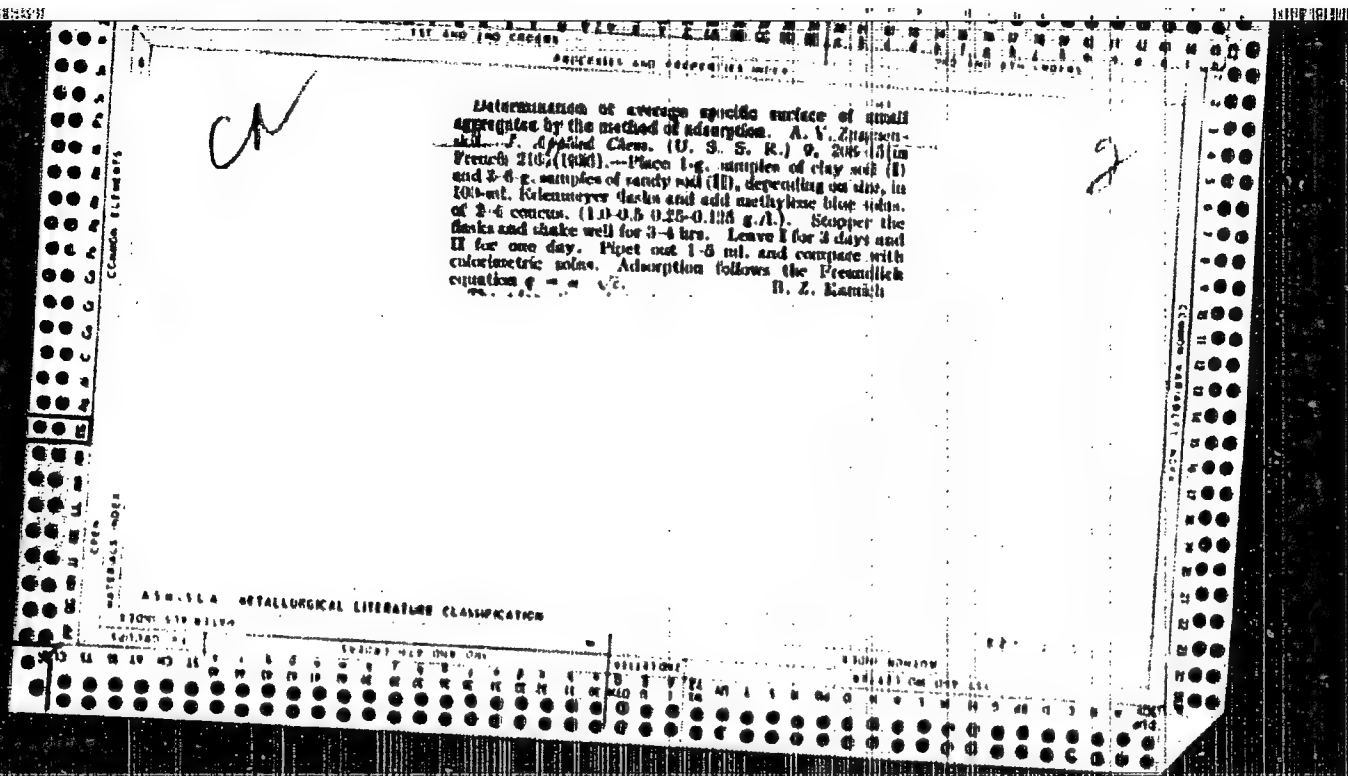
SO: SIRA SI 90-53, 15 Dec. 1953

PROKOPOVICH, A.Ye.; ACHERMAN, N.S., professor doktor tekhnicheskikh nauk, nauchnyy redaktor; ZHAMENSKIY, A.V., redaktor; KRYNOCHKINA, K.V., tekhnicheskiy redaktor.

[Modernization of milling machines] Modernizatsiya frezernykh stankov. Moskva, Vsesoyuznoe uchebno-pedagog. izd-vo Trud-rezervizdat, 1954. 44 p. (MIRA 7:12)
(Milling machines)

Cement-mineral colors based on sodium silicate.
A. V. Znamenskii and G. V. Sidorovich. *Sverdlov, Mal'gorod*,
1935. No. 3, 49-53. — A material made of sol. glass of
16 H₂O and 10% by wt. of cereate was mixed with cement
and applied to a concrete surface. The following properties
of the covering takes place in 3 stages: (1) formation of
a gel during an interval of 1 min. to 2 hrs. owing to the
incorporation of the cement and sodium silicate and water; (2)
drying of this gel during 6 hrs. to 15 days; (3) covering
the surface owing to interaction of its cement with the sodium
silicate and the cement of the covering. A certain amount of
cereate is necessary to make the covering layer elastic and to eliminate hair
cracks. The latter purpose is attained also by adding
sand. The optimal compas. of the covering were found to be:
50% liquid sol. glass 20.2, cereate 1.0, sand 48.3,
cement 24.2 and water 0.3%. With introduction of a mineral
color the respective percentages are: 20.2, 1.0, 43.5-48.0,
24.2 and 0.3%, plus 4.8-6.7% of the color.
B. H. Stefanovskii.





✓ Correlation of adsorption and chemical processes.
 A. V. Zaslavskii. *Colloid J. (U. S. S. R.)* 4, 631-4
 (1968).—Attempts were made to discover the mechanism
 of interaction between cellulose and NaOH and between
 Fe(OH)₃ and oxalic acid by means of the expts. by
 Klyachko (C. A. 30, 8008) and Shakhov (C. A. 30,
 7000).
 J. J. Scherman

AD-114 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COLUMNS

PROCESSED AND PREPARED IN 1968

3RD AND 4TH COLUMNS

ca

18

Studies on tripoli. Tripoli from the Tenth region.
A. V. Znamenskiy, J. Applied Chem. (U. S. S. R.) 8,
1373 (in French 1379) (1935). - This tripoli contains
much sand and clay. When it is added to cement, its
strengthening action does not appear for 3 months. The
quality is not improved by heating at 100° or by sili-
mentation. All the active SiO₂ can be extd. with 5%
sulfuric acid. H. M. Leichter

WATERWAYS - NOTE

ASTM - S. L. A. METALLURGICAL LITERATURE CLASSIFICATION

WEIGHT SPECIFICATION

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

The determination of benzene and acetone in adipic
acids of the soil. A. A. Polgany
(U. S. S. R.) II, 674-675 (1964). Applied Chem.
equation for the adsorption exchange given by Capon
(U. S. S. R.) 1964 is revised.
A. A. Polgany

ADDITIONAL INFORMATION ON LITERATURE CLASSIFICATION

ca

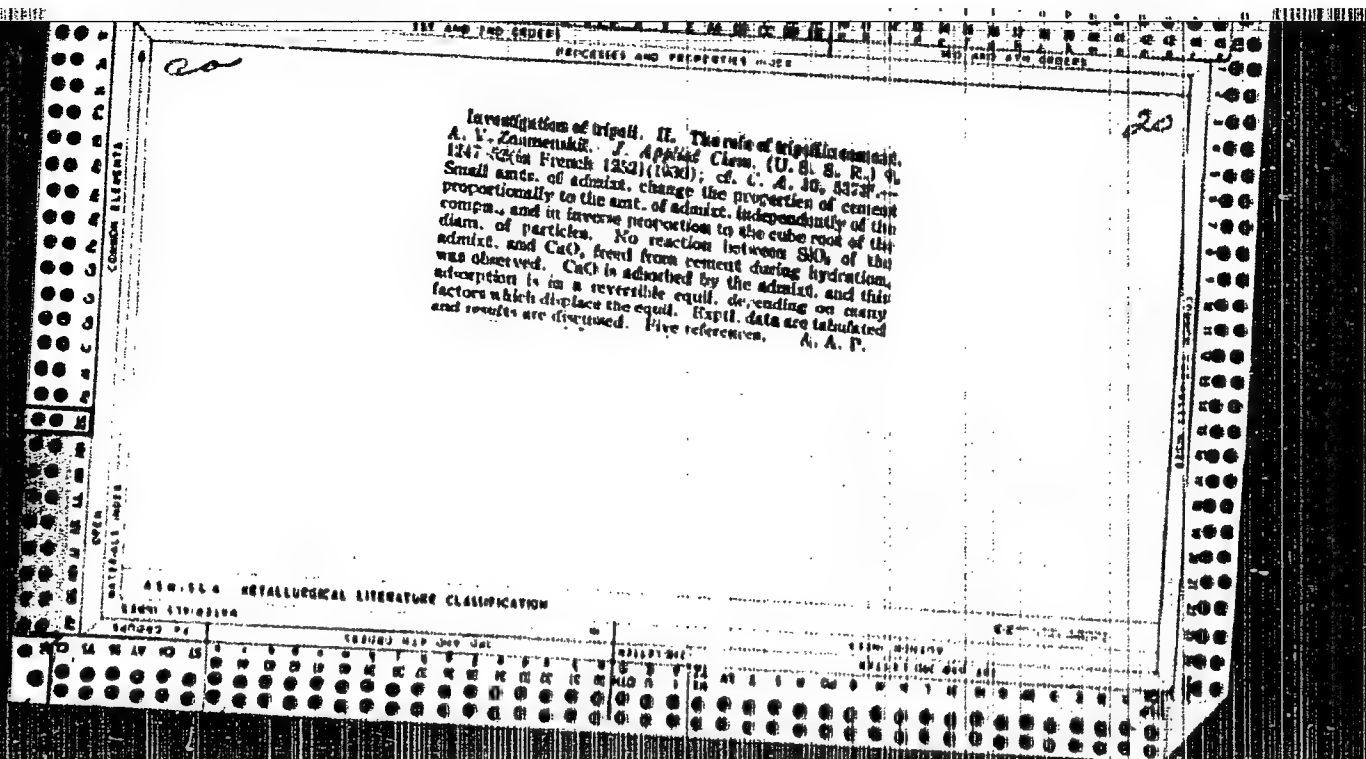
PROCEDURES AND PRESENTATION

The determination of basoids and acidoids in amphotoids of the soil. A. V. Znamenskiy. *J. Applied Chem.* (U. S. S. R.) 11, 479-481 (1938). The equation for the adsorption exchange given by Gapon (1915) is revised. A. A. Polyakov.

15

ASM-51A METALLURGICAL LITERATURE CLASSIFICATION

CLASS	SUBCLASS	SECTION	SERIAL	DATE	AUTHOR	TITLE	ABSTRACT	REMARKS
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Investigation of tripoli. III. The role of tripoli in cement mortars. A. V. Kuznetsov. *J. Applied Chem.* (U. S. S. R.) 10, 52 (in German 60) (1937); cf. C. A. 31, 1283. The elec. cond. of cement mortar varies parabolically with the content of water. Introduction of inert admixts. lowers the elec. cond. independently of the nature of the admixt., as a result of dehydration of the cement in the amt. detd. by the formula: $q = a\sqrt{f}$, where q is the coeff. of adsorption of water, amounting for tripoli to 0.60, and f is the amt. of (liquid admixt. when admixt. does not react (chemically) with $\text{Ca}(\text{OH})_2$ liberated by the hydration, but the admixt. affects the amt. physicochemically. This physicochem. action of the admixt. obeys the general law of equal distribution of energy in the system and the law given by the above formula. The amt. of inert admixt., which may be added to a cement mortar, the compn. of which corresponds to the elec. cond. at the upper portion of the paraboloid, is detd. by: $f(b) = P^2/(W - a\sqrt{f})$, where P

is the activity of cement, q is the amt. of cement, f is that of water, and the cond. is parabolically detd. by the requirement of the hardening. Right references IV. The "activity" of tripoli. Ibid. 61-7 (in German 67 N). Removal of $\text{Ca}(\text{OH})_2$ from aq. solns. by means of tripoli, clay and sand proceeds only by adsorption; the coeff. of adsorption by these admixts. are the same and the coeff. of adsorption for methylene blue are referred to each other as the sq. roots of the amt. wt. of lime and of methylene blue. The activity of an admixt. is measured by its adsorptive power, which may be detd. by the amt. of lime adsorbed from a soln. of 1 g. of admixt. in 100 ml. of water by the Laportiere method. Since the solution of HCl in the treatment with soda is a purely chem. process, the activity of the admixt. in this method has no relation to that of the lime method, but, because the neutralization velocity increases with increase of degree of dispersion and since the adsorptive power is a function of the sp. surface, there is an approx. const. relation between these two indexes for similar admixts. Two references.

A. A. Podgorny

ASH 51A METALLURGICAL LITERATURE CLASSIFICATION

CA

PROCESSING AND PROPERTIES INDEX

19

Irrigating and rain water of the city of Moscow. A. A. Podgorny. *J. Appl. Chem.* (U. S. S. R.) 10, 141 (1957) (1957). Forty-six samples of the above water, collected over the period of 2 months, were analyzed, and results are discussed from the public health viewpoint.

ASS-3LA METALLURGICAL LITERATURE CLASSIFICATION

RECOMMENDATION

STATION

STATION

ca
A.V. ZNAMENSKIY

Corrosion of Soil A. V. Znamenskiy and M. V. Piliipova. *Pedology* (U. S. S. R.) 1960, No. 2, 53-61 (in English, 51).—The oxidation processes in the soil depend on chem. compn., the mechanical structure and the bacterial flora of the soil. In order to study one factor at a time, a relatively simple reaction, corrosion of iron, was studied quantitatively in water and in soil. The aeration coeff. of soil is about the same as for relatively pure water: 5-7 g. per sq. m. per day, and is expressed for water and iron as $a = K \times A_p / l_{\text{max}}$, where l is the surface area and K is the diffusion factor. This formula is entirely applicable to soil. It demonstrates clearly the validity of the now abandoned diffusion theory of adsorption. Oxygen has to diffuse through the film of oxide to the metal surface and, in soil, it has to penetrate through the layer of soil particles to reach the iron. A sand layer 11 cm. thick covered with water 1 cm. deep produced corrosion in 10 days, with av. aeration coeffs. of 0.7325 and 0.6949, resp., when the diams. of the particles were 1 mm. and 1-0.5 mm. The screening effect is inversely proportional to the cube root of diams. Accordingly, the diffusion factor $K = 1.3d^{3/2}/D$, where D is wt. per unit vol., and d is the av. diam. of soil particles. The aeration coeff. both in water and soil is a function of the intensity of the oxidation process; it rises with temp., though not as much as other chemical reactions. It increases with the quantity of oxidizable substances in the soil. Thus when a soil ext. is substituted for water, the a value decreases, because the O is being absorbed and utilized by the org. matter.

C. S. Shapiro

ASB-51A METALLURGICAL LITER.

ZNAMENSKIY, A. G., KALININ, Fnu; ROSENBERG, Fnu; LEDEDEV, Fnu

"Georgiy Dmitriyevich Delonovskiy, (Microbiologist, 1875-1950, Obituary)," Zhur Mikrobiol, Epidemiol i Immunobiol, 1950, No. 10.

Mikrobiologiya, Vol XX, No. 5, 1951. W-24635

ZHAMENSKIY, A.I.

Protecting the Zakhmetskiy section of the Kara-Kum Canal against
sand drifts. Izv.AN Turk.SSR no.2:25-32 '56. (MLRA 9:8)

1. Institut geologii AN Turkmeneskoy SSR.
(Kara-Kum Canal--Sand dunes)

ZHABROVA, Z.V., inzh.; ZNAMENSKIY, A.K.; DERZHAVINA, M.F., inzh.

Use of elastic yarn in the hosiery industry. Tekst.prom. 19 no.4:
44-50 Ap '59. (MIRA 12:6)

1. Zamestitel' glavnogo inzhenera fabрики "Krasnoye snanya" (for
Znamenskiy).
(Hosiery industry) (Elastic fabrics)

ZNAMENSKIY, A.M.

Tripoli of Moscow Province. Uch. zap. MOPI 124:169-192 . 163.

The most efficient way of using the Moscow Basin low-grade
high-ash content brown coals. Ibid.:193-204

(MIRA 18:6)

ZNAMENSKIY, A.M.

Use of waste dumps in the quarries of Moscow Province. Uch.zap.
MOPI 97:41-46 '61. (MIRA 15:3)
(Moscow Province--Quarries and quarrying)
(Waste products)

ZNAMENSKIY, A.M.

Conditions governing the coal accumulation in the Lower Carbon-
iferous in the southwestern wing of the Moscow Basin. Uch.zap.
MOPI 97:3-21 '61. (MIRA 15:3)

(Moscow Basin--Coal geology)

ZNAMENSKIY, A.M.

Limestones, dolomites, and marls of Moscow Province. Uch.zap.
MOPI 97:23-39 '61. (MIRA 15:3)
(Moscow Province--Rocks, Sedimentary)

ZNAMENSKIY, A.P.; GORBUNOV, B.I.

Capron-and-graphite bushings for the pressure rolls of spinning machines. Tekst. prom. 24 no.10:44 O '64. (MIRA 17:12)

1. Nachal'nik tsekha Shuysko-Tezenskoy fabriki (for Znamenskiy).
2. Nachal'nik remontno-montazhnogo otdela shuysko-tezenskoy fabriki (for Gorbunov).

60

B-3-1

Re-oxidation of Fe²⁺. A. V. Kozmowski and M. V. Pittman. (February, 1910, No. 2, p. 41-42).—No oxidation of solids occurs at all, while the solids rich in oxygenates of a moderately polluted H₂O and, as in H₂O, the re-oxidation is a function of the amount of oxidizable matter. The capacity of soil oxidation is the net loss of the organic matter of the forest particles and directly in their case of dispersion. Soil particles depend the penetration of O₂ proportionally to the cube root of their diameter. (See also 1000 and 1001.)

CHALLENGING LITERATURE CLASSIFICATION

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B-7-10

Tentik quarry. A. V. Zhuravskiy (J. Appl. Chem. Russ. 1938, 11, 1873-1879). Quarry from the Tentik deposits is contaminated with about 65% of sand or clay; its active SiO_2 content is given approx. by $A = a - 3.8y$, where a is the total SiO_2 and y the $\text{Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3$ content, or, more exactly, by $k = -\log A/(a - 3.8y)$, where k is const. for a given sample, a is the no. of extractions with aq. Na_2CO_3 , and A the total amount of SiO_2 dissolved in a extraction. Admixtures of quarry to various materials setting; its beneficial effects become apparent after 4-8 months, and may depend on binding of excess CaCO_3 , or on its structural effect. Hardening reduces the active SiO_2 content of quarry except in presence of contaminants (cont.). N. T.

ASB-514 METALLURGICAL LITERATURE CLASSIFICATION

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BC 13-L-10

Common mineral objects based on sodium silicate. A. V. KAYANAK and G. V. SIKORSKI (Soviet. Mat., 1931, No. 5, 41-53).--A mixture of water-glass (I) and 16 wt.-% of cerosite (II) was mixed with cement and applied to a concrete surface. The covering adheres to the surface. The (I) renders it elastic and eliminates hair cracks; and also eliminates those. The optimum composition was: 60% liquid sol. glass 22-2, (II) 1-0, sand 48-2, cement 24-2, H₂O 6-8%. 4-8--0-1% of a mineral colour may be added. Chl. Anal. (c)

AMERICAN METALLOGICAL LITERATURE CLASSIFICATION

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BC

B-I-10

Examination. 11. Role of emery in cement hydration.
A. V. Znamenskiy, Izv. Akad. Nauk, 1936, 9, 1247.
Addition of equal wt. of emery to cement
affects the properties of the products to an extent $\propto r^2$,
where r is the mean diam. of the particles of emery.
The $\text{Ca}(\text{OH})_2$ formed during the hydration process
does not combine chemically with the SiO_2 contained
in the emery, but undergoes adsorption; the mean
adsorption coeff. for a no. of Russian emeries is 0.6.
R. T.

ASS-ELA METALLURGICAL LITERATURE CLASSIFICATION

SECTION	SUBSECTION	SECTION	SUBSECTION
1	1	1	1
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3	3	3	3
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[illegible]

BC

B-III-1

Determination by the adsorption method of the mean specific surface of finely granular powders. A. V. ZAKHAROV (J. Appl. Chem. Russ., 1936, 9, 208-210).--The mean sp. surface of soils is given by $S = 10,000/s$, where s is Freundlich's adsorption coeff. for methylene-blue.

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

GROUPS AND SUBGROUPS										CLASSIFICATION									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

BC

68-111-1

Determination of mean capillary radius in
 finely granular media from the coefficient of
 distribution of water. A. T. Kuznetsov (J. Appl.
 Chem. Russ. 1961, 34, 100-101). The distribution
 of H₂O in saturated soils varies according to Laplace's
 law. The average capillary radius is given by k/H
 $\log P_0/P_1$, where k is the distribution coeff., and P_0
 and P_1 are the H₂O contents at heights H and 0 cm,
 respectively. R. T.

ASS-64 METALLURGICAL LITERATURE CLASSIFICATION

RECORD SYMBOLS

SEARCHED MAR 1961

RELATION

INDEXED

FILED

APR 1961

U.S. DEPT. OF COMMERCE

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UNIVERSITY MICROFILMS

PERIODICALS

BOOKS

MAPS

MANUSCRIPTS

OTHER

ZHAMENSKIY, A.Ye.

Input and output reactance circuits of amplifiers with a finite
number of circuit elements. Elektrosviaz' 12 no.11:45-51
N '58. (MIRA 11:11)

(Amplifiers, Electron-tube)

ZNAMENSKIY, Aleksandr Yevgen'yevich; SIL'VINSKAYA, K.A., otr. red.;
PETROVA, V.Ye., red.; SLUTSKIN, A.A., tekhn. red.

[Controlled artificial lines] Reguliruyemye iskusstvennye linii.
Moskva, Gos. izd-vo lit-ry po voprosam svyazi i radio, 1961.
51 p. (MIRA 15:2)

(Radio lines) (Delay lines)

80V/106-58-11-6/12

AUTHOR: Znamenskiy, A. Ye.

TITLE: Input and Output Reactive Networks of Amplifiers With a Finite Number of Circuit Elements. (Vkhodnyye i vykhodnyye reaktivnyye tsepi usiliteley s konechnym chislom skhemnykh elementov.)

PERIODICAL: Elektrosvyaz', 1958, Nr.11, pp.45-51 (USSR)

ABSTRACT: These circuits are commonly used to couple from the characteristic resistance of a cable into the capacitance of the grid circuit of a valve or from an anode circuit into a cable. The relationship between resistance, capacitance and frequency is expressed by Bode's gain-area theorem (1)(Ref.1). In practice it is impossible without an infinite number of circuits to confine the total gain-area between definite limits. The expression for k (middle of p.46) measures the extent to which such an attempt is successful with a finite number of elements. The most generally encountered transfer function is that of (3). It will be assumed that the amplification is to be as constant as possible between the upper and lower

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SOV/106-58-11-6/12

Input and Output Reactive Networks of Amplifiers With a Finite Number of Circuit Elements.

limits of frequency and outside this range is to fall off as rapidly as possible. It is well-known that such a response is guaranteed by the use of a Chebyshev polynomial (Ref.2). After allowing for any transformed reactances, the circuits considered are those in Fig.3 and the response to be aimed at is in Fig.4. Upon substitution of the expression for the Chebyshev polynomial, the transfer function becomes (4) which is valid for circuits with even numbers of elements. The corresponding expression for utilization coefficient, k , is (5). The denominator of the expression to be integrated in (5) is given trigonometrically in (6). By changing the variable as in (8) the integral is evaluated in (9). Fig.5 is the graph of the Chebyshev function plotted in terms of the substituted variable and it may be easily confirmed that the integral in the numerator of (5) can be approximately reckoned equal to the shaded area within the rectangle. Even in the extreme case when the number of circuit elements is 2 the error due to this is only about 1% when the

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Input and Output Reactive Networks of Amplifiers With a Finite
Number of Circuit Elements.

SOV/106-58-11-6/12

permissible pass-band ripple is $\epsilon = 0.17$ and the frequency ratio $\gamma = 5$. Substituting the formal expression for the area of the rectangle we arrive at an approximation to k (10). The latter enables us to study the effect of k on pass-band distortion and the number of elements for any given ratio of upper to lower frequency (γ). Fig. 6 is a typical family of curves for $\gamma = 5$. A simple "rectangular filter" interpretation of Bode's formula would give the circuit gain as (2). Allowing for the utilization factor, k , this becomes (11). For example, if the stray capacitance is 10 pF and the cable resistance is 135 ohms, and the pass-band 48 kc/s wide, then the maximum gain according to Bode is 4.2 nepers. With a Chebyshev response however having a distortion $\epsilon = 0.02$, and a frequency ratio $\gamma = 5$, the gain is 3.76 nepers when the number of circuit elements is $n = 4$. Increasing n to 6 gives 3.95 nepers and for $n = 10$ the gain is 4.1 nepers. Starting from the transfer function with Chebyshev polynomial (4) the actual design of the circuit proceeds

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Number of Circuit Elements.

by decomposing this formula into factors (Ref.4) using (7). The result is (12). This leads to the input impedance (13). It is also possible to design for a more elaborate response by incorporating equalizing action as described in Ref.6. Instead of (4), (14) must then be used. In this latter case it may prove however more advantageous to use the expression due to A.F. Beletskiy (Ref.7). Prof. A.F. Beletskiy is thanked for posing the problem. There are 6 figures and 7 references, of which 6 are Soviet and 1 English.

SUBMITTED: February 3, 1958.

Card 4/4

TIKOSHENKO, V.V.; MARTYNISHKIN, A.M.; TSUKANOV, V.P.; GARGO, Ya.V.;
SHIKOV, I.P.; NIKONOV, A.V.; POSTNIKOV, V.P.; KOROLEV, G.D.;
ARTAMONOV, A.M.; TEMNIKOV, S.N.; KABLUKOVSKIY, A.P.; MAKHOV, A.Kh.;
KOTIKOV, A.Kh.; ZNAMENSKIY, B.A.; ZUYEV, T.I.; POZDNYAKOV, A.P.;
BALASHOV, S.A.; YERMONKHIN, I.P.

New design of electrode holders for electric-arc smelting furnaces.
Prom. energ. 15 no.8:13-14 Ag '60. (MIRA 15:1)
(Electric furnaces)

ZNAMENSKIY, B.Y.; FAKIDOV, I.G.

Electric resistance and its changes in the magnetic field of a polycrystalline alloy of Cu:22.8 at. % Mn. Fiz. met. i metalloved. 13 no.5:784-785 My '62. (MIRA 15:6)

1. Institut fiziki metallov AN SSSR i Sverdlovskiy gosudarstvennyy pedagogicheskiy institut.

(Copper-manganese alloys—Electric properties)

ZNAMENSKIY, B.

Some difficulties encountered in introducing synthetic and plastic products in ship repair. Mor. flot 25 no.2:37 F '65. (MIRA 18:4)

1. Rukovoditel' gruppy novoy tekhniki Tuapsinskogo sudoremontnogo zavoda imeni Dzerzhinskogo.

ZNAMENSKIY, B.V.; FAKIDOV, I.G.

Superparamagnetic properties of certain antiferromagnetic alloys
of the system Cu - Mn. Fiz. met. i metalloved. 14 no.3:391-
395 S '62. (MIRA 15:9)

1. Institut fiziki metallov AN SSSR i Sverdlovskiy gosudarstvennyy
pedagogicheskiy institut.

(Copper-manganese alloys—Magnetic properties)

18175
18140

41518
S/126/62/014/003/007/022
E039/E420

AUTHORS: Znamenskiy, B.V., Fakidov, I.G.

TITLE: Superparamagnetic properties of some antiferromagnetic alloys of the Cu-Mn system

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.3, 1962, 391-395

TEXT: Previous work by the authors and other workers is extended. The magnetic properties of the polycrystalline alloy Cu + 22.8 at.% Mn are investigated in magnetic fields up to 200 kOe and in the temperature range from 56 to 450°K. The method of preparation of the samples and the production of pulsed magnetic fields of 20 kOe is as described in earlier papers. It is shown that in magnetic fields of up to 30 kOe the approach to magnetic saturation follows the law

$$\sigma_{H,T} = \sigma_{\infty,T} \left(1 - \frac{A}{H^2}\right) \quad (5)$$

where σ is the magnetization and H the magnetizing field. For fields larger than 30 kOe the square law begins to change and Card 1/2

Superparamagnetic properties ...

5/126/62/014/003/007/022
EO39/E420

for fields above 75 kOe the law of approach to saturation is

$$\sigma_{H,T} = \sigma_{\infty,T} \left(1 - \frac{B}{H}\right) \quad (6)$$

The presence of ferromagnetic clusters in an antiferromagnetic matrix can lead to the appearance of terms of the form B/H in Eq.(6) which become dominant in very strong fields. No firm conclusion is drawn on the nature of the ferromagnetic clusters in the investigated alloys. Preliminary measurements on Cu-Mn alloys with an Mn content of 2.4, 5.3 and 7.5 at.% show that these alloys possess analogous magnetic properties. There are 6 figures.

ASSOCIATIONS: Institut fiziki metallov AN SSSR
(Institute of Physics of Metals AS USSR)
Sverdlovskiy gosudarstvennyy pedinstitut
(Sverdlovsk State Pedagogical Institute)

SUBMITTED: March 26, 1962

Card 2/2

FAKIDOV, I.G.; ZNAMENSKIY, B.V.

Magnetic properties of the polycrystalline alloy Cu-22.8
atom % Mn. Zhur. eksp. i teor. fiz. 40 no.5:1522-1523 My
'61. (MIRA 14:7)

1. Institut fiziki metallov AN SSSR i Sverdlovskiy
gosudarstvennyy pedagogicheskiy institut.
(Copper-manganese alloys—Magnetic properties).

18.8100 1130, 1045, 1418

24719

24,7900

8/056/61/040/005/019/019
B109/B212

AUTHOR: Fakidov, I. G., Znamenskiy, B. V.

TITLE: Magnetic properties of the polycrystalline alloy
Cu + 22.8 atom% Mn

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40,
no. 5, 1961, 1522 - 1523

TEXT: Measurements were done with an alloy consisting of Cu + 22.8 atom% Mn. The alloy had been obtained by h-f melting and had been subjected to a long tempering and subsequent hardening. It was found that the magnetic susceptibility of the alloy is independent of the field strength in fields up to 3000 oe and reaches a maximum at a temperature of 94° K. The magnetocaloric effect had a negative sign in the field range mentioned. The authors, therefore, came to the conclusion that the alloy is an antiferromagnetic material with a Neel point near 94° K. This antiferromagnetic material developed typical ferromagnetic properties at temperatures below T_N when exposed to external field exceeding a critical value H_p . Measurements of the (now positive) magnetocaloric effect demonstrated the

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Magnetic properties of the ...

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S/056/61/040/005/019/019
B109/B212

occurrence of a spontaneous magnetization. The magnetization reaches its saturation value in fields above 10,000 oe. The value of this critical field strength will change with varying temperature; e. g., at 56° K it amounts to 4000 oe. Above 94° K the alloy is paramagnetic for all values of the external field and it obeys the Weiss-Curie law. Results are shown in Figs. 1 and 2. It is noted that the alloy investigated resembles the well-known intermetallic compound MnAu₂ with respect to its magnetic properties; it is also pointed out that a neutron-diffraction study of the magnetic structure of the Cu-Mn alloy and a comparison with that of MnAu₂ (Ref. 9: A. Herpin, P. Meriel, Villain, C. R., Paris, 249, 1334, 1959) would be very valuable. The authors thank V. N. Novogrudskiy and E. A. Zavadskiy for discussions, and L. V. Smirnov for preparing the alloys. There are 2 figures and 9 non-Soviet-bloc references.

ASSOCIATION: Institut fiziki metallov Akademii nauk SSSR (Institute of Physics of Metals, Academy of Sciences USSR). Sverdlovskiy gosudarstvennyy pedagogicheskiy institut (Sverdlovsk State Pedagogic Institute).
February 24, 1961

SUBMITTED:

Card 2/4

ZNAMENSKIY, B.V.; FAKIDOV, I.G.

Magnetization and the magnetocaloric effect of the Cu ÷ 22.8
at o/o Mn polycrystalline alloy. Fiz. met. i metalloved. 13
no.2:312-314 F '62. (MIRA 15:3)

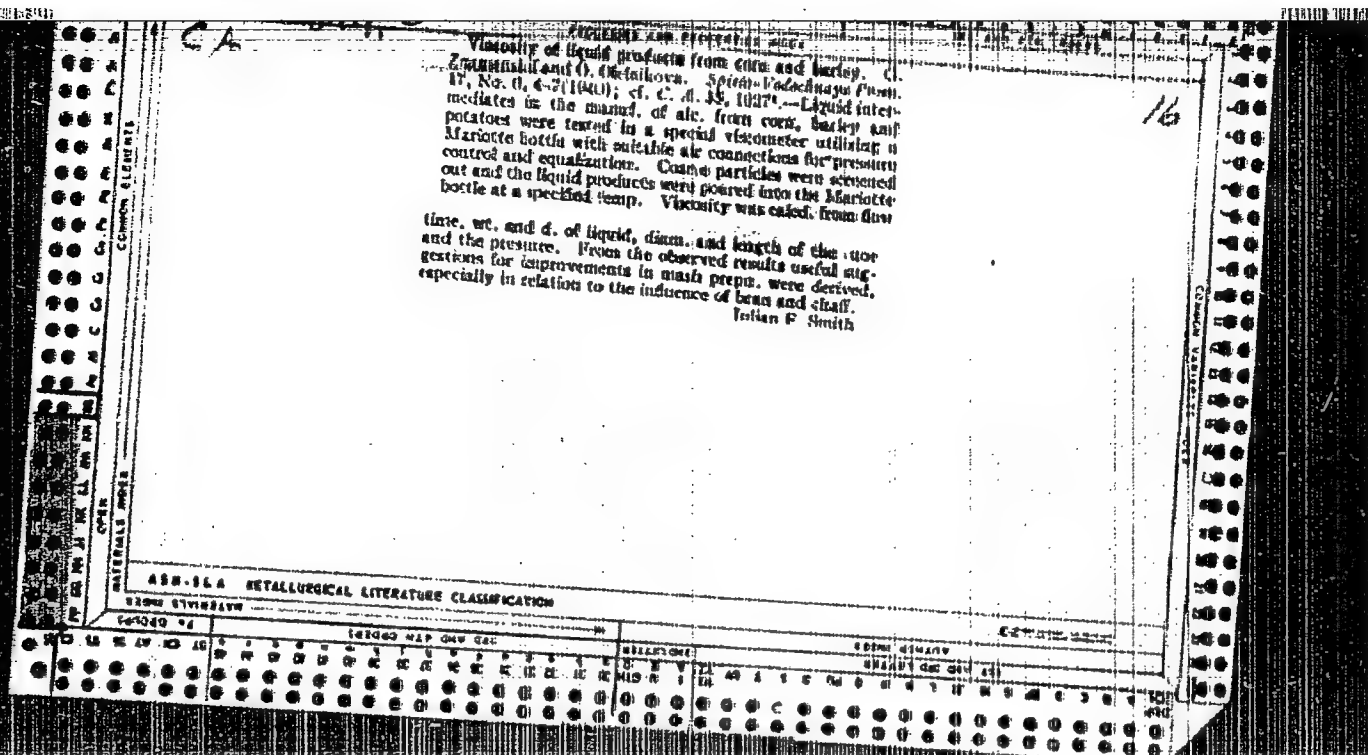
1. Institut fiziki metallov AN SSSR i Sverdlovskiy gosudarstvennyy
pedagogicheskiy institut.
(Copper-manganese alloys--Magnetic properties)

ZNAMENSKIY, G.
CA

15

Viscometry of liquid products in the alcohol industry and methods for calculating pipe-line layouts. G. Znamenskiy and O. Oleinikov. *Spiro. Tekhnika* 1944, 10, No. 1, 11 (1940). -- On the basis of tabulated data for viscosity of alc. (10 to 90.0%) and various strengths of sugar mashes from molasses and from potato starch equations are derived for flow in pipes of different diam. under different operating conditions. Power cost and other economic factors are considered. Julian F. Smith
Distillery devices. Dominador E. Batenga. *Sugar News* 21, 434 (1940). --A fuel-oil extractor, a device for handling H_2SO_4 and a cooling tower are described. W. W. Binkley

AND S.A. METALLURGICAL LITERATURE CLASSIFICATION



14

EXPERIMENTAL DATA ON THE CHLORINATION OF DRINKING WATER CONTAINING PATHOGENIC MICROORGANISMS. G. A. ZNAMENSKIY, *Voenno-Sant. Delo* 1937, No. 3, 44-9; *Chem. Zvezd.* 1939, 1, 4217. - The investigation showed that the usual dose of chloride of lime, as used, by the Cl demand of the water, does not have sufficient bactericidal effect on water contg. pathogenic organisms (typhoid, paratyphoid, and dysentery bacilli and the micrococci of Malta fever). A moderate no. of the pathogenic organisms are killed during the first 20-30 min. but even after 3 hrs. a certain percentage of them remain alive. A double dose of Cl is required to kill the bacilli of paratyphoid B within 3 hrs.

W. A. Moore

KONDRAT'YEVA, V.F.; BELONOVSKIY, G.D., professor, savetnyushchiy; ZNAMENSKIY, G.A.,
professor, direktor.

Preparation of a dry medium for the detection of B. Perfringens. Author's
abstract. Zhur.mikrobiol.epid.i immun. no.8:64-65 Ag '53. (MLRA 6:11)

1. Kafedra mikrobiologii Gosudarstvennogo ordena Lenina instituta usover-
shenstvovaniya vrachey im. S.M.Kirova (for Belovskiy). 2. Gosudarstvennyy
ordena Lenina institut usovershenstvovaniya vrachey im. S.M.Kirova (for
Znamenskiy, G.A.). (Bacteriology--Cultures and culture media)

Library of Med Sci, U.S. Army, New York, New York
Library

USSR/Medicine - Epidemiology

FD-1646

Card 1/1 : Pub. 148-26/28

Author : Znamenskiy, G. A. and Belyakov, V. D.

Title : ~~USSR/Medicine - Epidemiology~~
Certain theoretical problems of epidemiology

Periodical : Zhur. mikro, epid. i immun. 7, 103-108, Jul 1954

Abstract : A discussion of epidemiology as a "social-medical" science from the dialectical viewpoint is given. Epidemiology is defined from the point of view of communist ideology. No references are cited. A quotation from Engel's is used to illustrate the author's contentions.

Institution : --

Submitted : August 15, 1953

ZNAMENSKIY, G. A., USPENSKIY, N. D., OSIPYAN, V. T.

Application of Aerosol Bombs (VMA) in Disinfestation Practice.

VOYENNO-MEDITSINSKIY ZHURNAL (MILITARY MEDICAL JOURNAL), No 12, 1954. p. 50

ZNAMENSKIY, G.A.; STOLBOV, V.S.; SHCHERBAN', S.A.[deceased];
TURCHIN, P.Ye., red.; DANILOVA, Z.S., red.-leksikograf;
KUZ'MIN, I.F., tekhn. red.

[French-Russian aeronautical dictionary] Frantsuzsko-russkii
aviatsionnyi slovar'. Moskva, Voenizdat, 1962. 485 p.

(MIRA 15:6)

(French language--Dictionaries--Russian)
(Aeronautics--Dictionaries)

ZNAMENSKIY, G. M.

*Mechanical
Eng.*

DECEASED

see ILC

ZNAMENSKIY, G.M.

POPOV, V.I.; DOBROSERDOV, L.L.; STABNIKOV, V.N.; ANDRIYEV, K.P.;
ZNAMENSKIY, G.M., professor, rezensent; SKOHL, D.I., kandi-
dat tekhnicheskikh nauk, rezensent; SEREGIN, P.V., kandidat
tekhnicheskikh nauk, rezensent; IZRAILEVICH, L.M., inzhener,
rezensent; MASLOVA, Ye.V., redaktor; DUBOVKINA, N.A., tekhnicheskiiy redaktor.

[Technological equipment for fermentation industries] Tekhnologicheskoe oborudovanie brodil'nykh proizvodstv. Moskva, Pishchepromizdat, 1953. 515 p. (MLA 7:8)
(Distilling industries) (Brewing industries)

ZNAMENSKIY, G.H.; STENDER, V.V.

Electrolysis of acid solutions of zinc sulfate at very low current densities. Zhur. prikl. khim. 33 no.12:2728-2730 D '60.

(MIRA 14:1)

1. Dnepropetrovskiy khimiko-tehnologicheskii institut.
(Zinc sulfate)

DATE 20/ 38

ZNAMENSKIY, G.N.; ZHUK, A.P.; STENDER, V.V.

Effect of the conditions of electrolysis of zinc chloride acid solutions on the magnitude of the true surface of zinc precipitates. Ukr. khim. zhur. 31 no.4:367-372 '65.

(MIRA 18:5)

1. Dnepropetrovskiy khimiko-tehnologicheskii institut.

CHAYKOVSKAYA, V.M.; AFANAS'YEV, G.F.; ZNAMENSKIY, G.N.

Properties of acid solutions of zinc sulfate. Zhur.prikl.khim.
36 no.6:1355-1357 Je '63. (MIRA 16:8)

1. Dnepropetrovskiy khimiko-tehnologicheskii institut.
(Zinc sulfate) (Sulfuric acid)

ZNAMENSKIY, G. N., PAKHOMOVA, G. N., and STENDER, V. V.

"Selection of composition of electrolyte, material for the cathode and obtaining of zinc at high current densities with use of ordinary stationary and continuous-action mechanized electrolyzers (drum, disk and others)".

Report presented at the Intervuz Conference on Electrodeposition of Nonferrous Metals, Ural Polytechnical Institute im S. M. Kirov, Sverdlovsk, held from 27-30 May 1963

(Reported in Tsvetnyye Metally, No. 10, 1963, pp. 82-84)
JPRS 24,651 19 May 64

ZNAMENSKIY, G. N.
KHEVEYEV, V. A.

PHASE I BOOK EXPLOITATION SOV/2216

5(4)

Sovetskoye gosudarstvennoye izdatel'stvo khimicheskoy literatury, Moscow, 1956.

Trudy... i laborantov (Transactions of the Fourth Conference on Electrochemistry: Collection of Articles) Moscow, Izd-vo AN SSSR, 1956, 869 p. First all printed. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR, Otdel ony khimicheskoy nauki.

Editorial Board: A. M. Prusakov (Resp. Ed.), Academician, O. A. Yasin, Professor, S. I. Zhidnev (Resp. Secretary), S. M. Kabanov, Professor, Professor, S. I. Zhidnev (Resp. Secretary), S. M. Kabanov, Professor, Ya. M. Kolotyris (Resp. Secretary), V. V. Loev, R. D. Lukovtsev, Professor, Z. A. Solov'yev, V. V. Stander, Professor, and G. M. Flakovich; Ed. of Publishing House: N. O. Yegorov; Tech. Ed.: T. A. Prusakov.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

SCOPE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences, USSR Academy of Sciences, and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes, metal electrodeposition and industrial electrolysis. Abstracts of reports are given at the end of each section. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Stander, V. V., G. Z. Kirizakov, G. M. Znamenskiy, S. A. Alekseyev, and G. M. Flakovich. Electrolytic Preparation of Zinc During the Electrolytic Preparation of Zinc 461

Loskutov, A. A. and Ya. I. Dubynin (Dnepropetrovskiy Khimiko-tekhnologicheskii Institut imeni P. M. Shcherbatskogo, Dnepropetrovsk Institute of Chemical Technology imeni P. M. Shcherbatskogo, Dnepropetrovsk). Electrocrystallization of Bismuth from an Organonitride Electrolyte 467

Rodashevskiy, A. I. and Ya. Ya. Matulis (Institute of Chemistry and Chemical Technology, Academy of Sciences, Lithuanian SSR). New Electrolyte for Bright Tinning 477

Rodashevskiy, A. I. and K. M. Zharinov. Adhesion of Nickel Plating to Nickel, Nickel-Copper, Nickel-Aluminum and Chromium-Nickel Alloy 482

Lipin, A. I. Contact Separation of Some Metals at the Surface of Aluminum Alloys 486

Card 19/24

S/020/61/157/002/011/020
B103/B215

AUTHORS: Znamenskiy, G. N., Gamali, I. V., and Stender, V. V.

TITLE: Peculiarities of electrodeposition of metals from extremely pure solutions

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 2, 1961, 335-337

TEXT: The authors describe experiments on the electrodeposition of the electronegative metals zinc and manganese from extremely pure solutions. They found that the chemically pure salts usually used for studying the kinetics of such processes, do not guarantee the required experimental purity, not even when they have been recrystallized. Small amounts of organic impurities in the solution hamper the determination of the influence of surface-active admixtures on the structure of the cathodic deposit, and on the value of cathodic polarization. Therefore, the authors used extremely pure $ZnSO_4$ solutions produced as follows: metallic zinc contained $10^{-5}\%$ of admixtures and was produced by sublimation in a nitrogen atmosphere, ✓

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Peculiarities of electrodeposition...

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following the method of the Gipronikel' Institute. Chemically pure sulfuric acid was distilled. Water was boiled in potassium permanganate, and then distilled three times, but 1/3 (first portions) of the distillate was not used. The solution thus obtained was boiled again, and then for a long while exposed to current from platinum electrodes. By using standard concentrations (Zn 60 g/l, H_2SO_4 100 g/l) at 20°C, the authors obtained from this solution a current output of zinc up to 60% at low current density (1 a/m^2), and up to 99% at 5 a/m^2 . Zinc, however, was intensively dissolved already at 30 a/m^2 in an electrolyte of chemically pure $ZnSO_4$ which had been recrystallized three times. The electrode potential of high-purity zinc without current or with weak current is shifted by 25-30 mv toward negative values (as compared to the potential of the conventional $U_p(TaO)$ electrolytic zinc). Only glass parts can be used in the electrolytic cell when using high-purity solutions. Plastics (viniplast, organic glass, polyethylene) change the structure of deposited zinc. Crystals become irregular and small. On the basis of these results, the authors worked out a method of

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Peculiarities of electrodeposition...

measuring the active surface of zinc, which gives well reproducible results, and is also applicable to other metals (Ref. 5, V. V. Stender, G. N. Znamen-skiy, Nauchn. dokl. vyssh. shkoly, ser. khim., 1, 189 (1959)). For similar experiments with manganese, the authors used an electrolyte of 50 g/l of manganese (as chloride), and 110 g/l of ammonium chloride. Manganese was dissolved at pH >1. The solution was purified with manganese sulfide which was obtained from a previously purified manganese chloride solution and ammonium sulfide. Ammonium sulfide was obtained by absorption of hydrogen sulfide by an ammonia solution in water distilled twice. H_2S was obtained from chemically pure sodium sulfide previously purified from arsenic. After purification of sulfide, the manganese electrolyte was electrolytically treated in a glass vessel at a current density of 20-50 a/m². In the vessel, there was an anodic glass cell with a glass diaphragm, a platinum anode, and a cathode of pure aluminum. The catholyte was constantly stirred. Anodic gases were sucked off. Manganese hydroxide which was deposited in the catholyte and oxidized to dioxide by atmospheric oxygen, adsorbed all sorts of admixtures from the electrolyte. After filtration, the solution was subjected to another electrolytic treatment. This process was repeated

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Peculiarities of electrodeposition...

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three times (altogether for 200-220 hr). Aluminum hydroxide obtained by anodic dissolution of A-00 (A-00) aluminum in a pure manganese chloride solution at a current density of 10 a/m^2 , was then added to the solution. Finally, the solution was filtered with a glass filter. From this solution the authors deposited manganese at 20°C , a pH of 7, and a current density of only 10 a/m^2 . At 2000 a/m^2 , the current output of manganese was 90%. All manganese deposits were of clear crystalline structure, even when suspended particles of manganese hydrates were added to the catholyte. The authors hold the opinion that imperfect crystalline deposits of manganese, or the absence of deposits at low current densities are due to admixtures in the electrolyte. The authors found that the crystallization of zinc and manganese in pure electrolytes does not essentially differ from the electrocrystallization of silver (A. T. Vaganyan, Ref. 8, Elektroosazhdeniye metallov - Electrodeposition of Metals -, Izd. AN SSSR, 1950). They state that the kinetics of this process and the action of admixtures in extremely pure electrolytes should be studied. There are 2 figures and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The

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Peculiarities of electrodeposition...

S/020/61/137/002/011/020
B103/B215

reference to the English-language publication reads as follows: Ref. 2:
O. M. Bocklis, B. Conway, Trans. Farad. Soc., 45, 989 (1949).

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskii institut im.
F. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical
Technology imeni F. E. Dzerzhinskiy)

PRESENTED: October 15, 1960 by A. N. Frumkin. Academician

SUBMITTED: May 9, 1960

Card 5/5

5(4)

327/156-53-1-49/54

AUTHORS:

Stender, V. V., Znamenskiy, G. N.

TITLE:

The Determination of the Active Current Density in the Case of the Electro-precipitation of Zinc at High Current Densities (Opredeleniye deystvuyushchey plotnosti toka na primere elektroosazhdeniya tsinka pri vysokikh plotnostyakh toka)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 1, pp 189 - 192 (USSR)

ABSTRACT:

In the electro-crystallization of metals various factors (current density, temperature, time, ion concentration, etc) cause a continuous change in the electrolytic precipitation, and the determination of the actual current density is thus rendered difficult. The paper under consideration studies the changes in the active surface on the basis of the electrolytic precipitation of zinc at high current densities (6000 a/m^2), the above-mentioned changes being particularly well noticeable in this process. The active surfaces of the zinc precipitations obtained under different conditions were judged on the basis of hydrogen hypertension. Zinc was used that had been distilled in a nitrogen atmosphere. In the

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The Determination of the Active Current Density in the Case of the Electro-precipitation of Zinc at High Current Densities SOV/156-52-1-49/54

same way water and sulfuric acid were purified to a high degree by means of distillation. A platinum plate was used as an anode, zinc monocrystals and various zinc precipitations served as a cathode. The potential-measuring was effected directly with respect to a saturated calomel electrode. Diagrams show the shifting in a positive direction of the hydrogen hypertension, as a function of time and temperature. Tables present the calculated enlargement of the active zinc surface as compared with the visible surface. According to these data the actual current density decreases rapidly, which explains the slowing-down of precipitation formation. With a precipitation of 2 mm thickness, the critical current density at which a re-dissolution of zinc may occur is almost reached. The method described can also be employed for the investigation of the surfaces of other pure metals (Cu, Cd, etc). There are 2 figures, 1 table, and 6 references, 4 of which are Soviet.

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The Determination of the Active Current Density in the Case of the Electro-precipitation of Zinc at High Current Densities SCV/156-59-1-49/54

ASSOCIATION: Kafedra tekhnologii elektrokhimicheskikh proizvodstv Dnepropetrovskogo khimiko-tekhnologicheskogo instituta (Chair of the Technology of Electrochemical Products of the Dnepropetrovsk Institute of Chemical Technology)

SUBMITTED: July 15, 1958

Card 3/3

NAGIRNYI, V.M.; ZNAMENSKIY, G.N.

Some features of the deposition of zinc and cadmium on various cathodes. Ukr. khim. zhur. 31 no.9:962-965 '65.

(MIRA 18:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut imeni F.E. Dzerzhinskogo.

ZNAMENSKIY, G.N.; STENDER, V.V.

Effect of the conditions of electrolysis on the size of the
active surface of cathodic zinc. Zhur.prikl.khim. 37 no.7:
1478-1483 J1 '64. (MIRA 18:4)

5 1310

21008
S/080/61/034/006/010/020
D247/D305

AUTHORS: Znamenskiy, G.N., Mazanko, A.F., and Stender, V.V.

TITLE: Characteristics of codeposition of zinc and cobalt
from sulfate solutions

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 6, 1961,
1305 - 1311

TEXT: The present paper reports a study of phase structures and the nature of their distribution during codeposition of Zn and Co. Attention is mainly directed to the distribution of H overpotential in Zn-Co alloys which has a considerable influence on the process of electrolytic Zn separation. Alloys were thermally prepared from 99.999 % pure Zn and 99.98 % electrolytic Co which were dissolved in chemically pure H₂SO₄ and diluted 3-fold with distilled water. Zn-Co alloys were prepared from an electrolyte of composition 30-90 g/l Zn and 10-100 g/l Co, or pH 2-3, temperature 20°C, with current density of 250-300 A/dm². The alloys, before measuring H

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Characteristics of codeposition ...

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overpotential, were polished and ground with subsequent cathode degreasing and rinsing. Polarization curves were obtained with a 1N H₂SO₄ solution at 20°C. Fig. 1 shows the effect of Co content in the alloy on overpotential of H liberated in both thermal and electrolytic alloys, a marked reduction of overpotential of H separation being observed on increasing Co content to 5 % though lower by 80-100 mv in electrolytic than in thermal alloys (for the same Co content). Microstructures of the two types of alloy are also compared. The thermal alloy containing 4.6 % Co is a 2-phase system of Zn and Co₅Zn₂₁ which is in accordance with the equilibrium graph. The structure of the electrolytic alloy with almost the same Co content is also 2-phase, but the amount of the more positive phase is much less and approximately corresponds to the Co content. These differences were verified by heat treatment of the electrolytic alloy at 350°C for 6 hours, followed by again measuring H overpotential and studying the microstructure. The magnetic properties of the two alloy types were examined. Co₅Zn₂₁ is not ferromagnetic and the thermal alloys with 0 - 20 % Co were also

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Characteristics of codeposition ...

found to be not ferromagnetic. Electrolytic alloys with more than 1 % Co were found to have clearly defined ferromagnetic properties which disappeared after heat treatment. The marked displacement of potentials shown on curves 5 and 6 (Fig. 8) indicates that the inception of intensive Zn dissolution is due to reduction of active current density below the critical value. To determine inception of an auto-solution of cathode Zn in relation to current density maintaining Co constant in the electrolyte, the potential variation of Zn residue with time for varying current densities was measured, using a solution of 35 g/l Zn 150 g/l H_2SO_4 and 20 mg/l of Co at 50°C, with current densities from 1000 to 6000 A/dm². With current densities of 1000 and 6000 A/m², the potential evenly changes to positive values; for 6000 A/m², the gradient of the curve is steeper and therefore the active current density falls more rapidly (Ref. 15: G.N. Znamenskiy, Byull. tsvetn. met., 1959, vol. 11, no. 136, p. 24). The auto-dissolution of the Zn deposit begins at 6000 A/m² after electrolysis for 100 minutes, at 3000 A/m² after 80 minutes, and at 1000 A/m² after 10 minutes. There

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D247/D305

Characteristics of codeposition ...

are 9 figures and 16 references: 12 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: U. Tainton, Trans. Am. Electrochem. Soc., 1922, vol. 41, p. 392; G.M. Westrip, J. Chem. Soc., 1924, vol. 125, p. 1122; W. Harkins and H. Adams, J. phys. Chem., 1926, vol. 26, p. 205.

ASSOCIATION: Dnepropetrovskiy tekhnologicheskii Institut (Dnepropetrovsk Technological Institute)

SUBMITTED: September 12, 1960

Card 4/6

ZNAMENSKIY, I., inzh.; NAYMAN, I.; KULIKOV, V., master tsekha (G.Kuybyshev)

Technical information. Okhr.truda i sots. strakh. 5 no.2:29-31
F '62. (MIRA 15:2)

1. Zaveduyushchiy laboratoriyey sredstv individual'noy zashchity
TSentral'nogo nauchno-issledovatel'skogo instituta okhrany truda
Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov (for
Nayman).

(Technological innovations)

ZNAMENSKIY, I.

Organizatsiya i Mekhanizatsiya Gidromeliorativnykh Rabot (Organization and Mechanization of Work on Hydraulic Projects)

522 p. 3.00

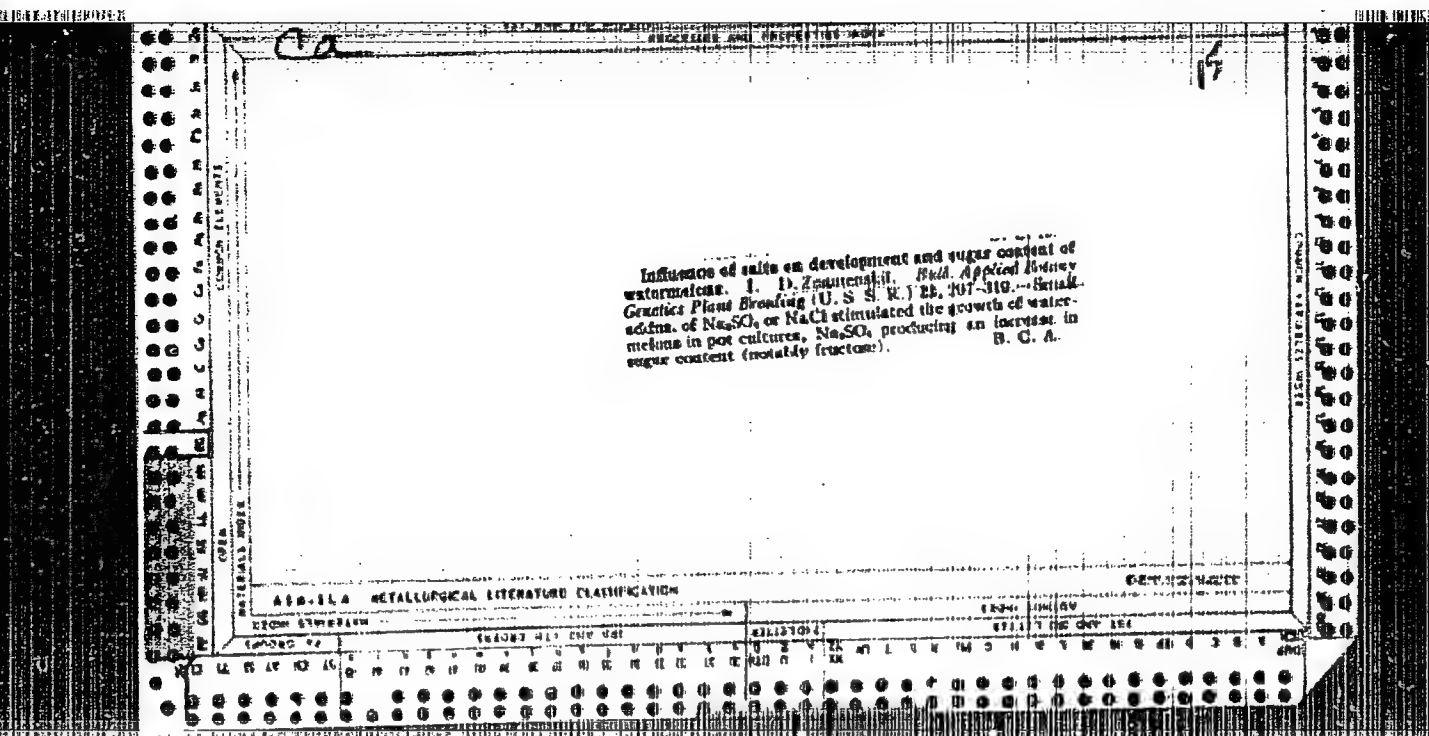
SO: Four Continent Book List, April 1954

Be

Influence of salts on development and sugar content of water-melons. I. D. ZAKHARCHUK (Bull. Appl. Bot. Leningrad, 22, 227-229; Biol. Zhurn. 1954, A, 4, 483). Small additions of Na_2SO_4 or NaCl stimulated the growth of water-melons in pot culture, Na_2SO_4 producing an increase in sugar content (notably fruitless). A. O. P.

ADDITIONAL METALLURGICAL LITERATURE CLASSIFICATION

REPORT SYMBOL	CLASSIFICATION	REMARKS	DATE
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GRINKEVICH, Petr Stepanovich, dotsent, kand.tekhn.nauk; DOMBROVSEIY,
N.G., prof., doktor tekhn.nauk, obshchiy red.; ZNAMENSKIY, I.I.,
prov., doktor tekhn.nauk, retsenzent; KIRIYENKO, I.K., retsen-
zent; SHKUNDIN, B.M., inzh., retsenzent; BELIKOV, M.P., dotsent,
kand.tekhn.nauk, nauchnyy red.; KROMOSHCH, I.L., inzh., red.
izd-va; EL'KINA, E.M., tekhn.red.; SOLNTSEVA, L.M., tekhn.red.

[Building machinery] Stroitel'nye mashiny. Pod obshchei red.
N.G.Dombrovskogo. Moskva, Gos.izd-vo lit-ry po stroit., arkhit.
i stroit.materialam, 1958. 495 p. (MIRA 13:1)

1. Zamestitel' glavnogo mekhanika Kuybyshevgidrostroya (for
Kiriyenko).

(Building machinery)

GRINEVICH, Petr Stepanovich, dotsent, kand.tekhn.nauk; DOMBROVSKIY, N.G.,
prof., doktor tekhn.nauk, obshchiy red.; BELIKOV, M.P., dotsent,
kand.tekhn.nauk, nauchnyy red.; KROMOSHCH, I.L., inzh., red.izd-va;
ZHAMENSKIY, I.I., prof., doktor tekhn.nauk, retsenzent; KIRIYENKO,
I.K., zamestitel' glavnogo mekhanika, retsenzent; SHKUMDIN, B.M.,
inzh., retsenzent; EL'KINA, E.M., tekhn.red.; SOLYSEVA, L.M., tekhn.red.

[Building machinery] Stroitel'nye mashiny. Pod red. N.G.Dombrovskogo.
Moskva, Gos.izd-vo lit-ry po stroit., arkhit.i stroit.materialam,
1958. 495 p.
(MIRA 12:3)

1. Kuybyshevgidrostroy (for Kiriyenko).
(Building machinery)

The Mugan irrigation system and its present condition. Petrograd, 1923. 90 p.
Cyr. 4 TC8

1. Irrigation-Azerbaijan

ZNAMENSKIY, I.I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Submitted by</u>
<u>Znamenskiy, I.I.</u>	"Organization and Mechanization of Water Soil Improvement Works" (student manual)	Kazakh Agricultural Institute; Omsk Agricultural Institute imeni S.M. Kirov

SO: W-30604, 7 July 1954

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 233 - I

BOOK

Author: ZNAMENSKIY, I. I., Professor

Call No.: AF589978

Full Title: ORGANIZATION AND MECHANIZATION OF HYDRO-AMELIORATION WORKS

Transliterated Title: Organizatsiya i mekhanizatsiya gidromeliorativnykh rabot

Publishing Data

Originating Agency: None

Publishing House: State Publishing House of Agricultural Literature

Date: 1952

No. pp.: 523

No. of copies: 15,000

Editorial Staff

Editor: Ryabyshev, M. G., Engineer

Editor-in-Chief: None

Tech. Ed.: None

Appraisers: Zhurin, V. D.,
Professor, Doctor Tech. Sci.

and Fenin, N. K., Dotsent
and Fenin, N. A., Engineer, Assistant

Others: One chapter was written by Lopatin, N. A., Engineer, Assistant
to Prof. Znamenskiy.

Text Data

Coverage: This textbook describes the methods and organization of large-scale mechanized hydraulic construction, and the types and uses of individual machines (pumps, excavators, cement mixers, etc.). There are frequent sketches of recent Soviet models, which do not seem to incorporate any new principle.

1/2

Organizatsiya i mekhanizatsiya gidromeliorativnykh rabot

AID 233 - I

The book is of possible interest as indicating the machinery used in the huge new Soviet hydroelectric and irrigation projects.

Purpose: Approved by the Ministry of High Education USSR as a textbook for hydro-amelioration institutes and university departments.

Facilities: Many Soviet hydroelectric and irrigation projects are mentioned.

No. of Russian and Slavic References: A few scattered references in footnotes.

Available: A.I.D., Library of Congress.

ZNAMENSKIY, Il'ya Ivanovich, prof. [deceased]; LETNEV, B.Ya., red.;
GUREVICH, M.M., tekhn.red.

[Organization and mechanization of work in hydraulic engineering
for land improvement purposes] Organizatsiya i mekhanizatsiya
gidromeliorativnykh rabot. Izd.2., perer. i dop. Moskva, Gos.
izd-vo sel'khoz.lit-ry, 1960. 639 p. (MIRA 13:11)
(Hydraulic engineering)

NAME: NAMENSKIY, I. YE. CA

11-D

A method of determining the proteins of leucins. I. B. Znamenskiy. *Acta Inst. Nat. Acad. Sci. U. R. S. S.*, *Biol. Expt. Ser.* 4, No. 2, 273-82 (1938); *Bull. Sov. Acad. Sci. Ser. 2*, 151 (1938).--The method is described. Thirty references. R. W. B.

ADP-11A METALLURGICAL LITERATURE CLASSIFICATION